A STUDY TO DETERMINE A TRAINING PLAN FOR THE MEDICAL RECORD TECHNICIANS OF NAVAL HOSPITAL, SAN DIEGO IN PREPARATION FOR THE IMPLEMENTATION OF THE DIAGNOSIS RELATED GROUP SYSTEM

A Graduate Management

Project

Submitted to the Faculty Of

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In Partial Fulfillment Of The

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Of

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By

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The purpose of this study was to obtain information about the level of knowledge that Medical Records Technicians at Naval Hospital San Diego (NHSD) have on Diagnosis-Related Groups and to provide recommendations on what information on DRGs should be considered in developing an effective training program. On August 29, 1989 a DRG Knowledge Survey was administered to 17 Medical Records Technicians at NHSD. The survey was used to evaluate the MRT's general knowledge of DRGs and their specific knowledge in the areas of Prospective Payment and Retrospective Payment, the purpose of DRGs, the scope of DRGs, medical records coding, computers, the resource reallocation methodology that is being used by the Department of Veteran's Affairs and the DRG implementation plans of the Navy Department's Bureau of Medicine and Surgery (BUMED). The findings indicate that MRTs at NHSD, on the average, have minimal knowledge of DRGs and strongly suggest that formal training is required if a prospective payment system is to be successfully implemented at this Command.

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ABSTRACT

The purpose of this study was to obtain information about the level of knowledge that Medical Records Technicians (MRTs) at Naval Hospital, San Diego (NHSD) have on Diagnosis Related Groups (DRGs) and to provide recommendations on what information on DRGs should be considered in developing an effective training program. On August 29, 1989 a DRGs Knowledge Survey was administered to 17 Medical Records Technicians (MRTs) at NHSD. The survey was used to evaluate the MRTs general knowledge of DRGs and their specific knowledge in the areas of Prospective Payment and Retrospective Payment, The Purpose of DRGs, The Scope of DRGs, Medical Records Coding, Computers, The Resource Reallocation Methodology that is being used by the Department of Veteran's Affairs, and the DRGs Implementation Plans of the Navy Department's of Bureau of Medicine and Surgery (BUMED). The finding revealed that MRTs at NHSD, on the average, have minimal knowledge of DRGs, and strongly suggests that formal training is required if a Prospective Payment system is to be successful at this Command.

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INTRODUCTION

In his article, Preparing for Prospective Payment, James B. Flanagan stated that in preparing for prospective payment, many institutions have focused attention on long-range issues associated with case-mix analysis and physician practice patterns (Flanagan, 1983). While this type of planning is worthwhile, it did not address the immediate and pressing challenges that faced the civilian community when they first attempted to implement the DRGs system and will not meet the immediate challenges facing each Navy Medical Treatment Facility (NMTF) during the next year. Instead, NMTFs must ensure that a correct and timely flow of information for each admission results in a DRGs assignment which legally and ethically states the hospital's position, and secures the appropriate reimbursement (MacDonald, 1983). If NMTFs are to meet the challenges, communication flow, medical records coding methods requirements, and current data collection and analysis requirements, management systems may need adjusting. It is also imperative that those individuals delegated the responsibility of overseeing this task have an adequate level of

knowledge on Diagnosis Related Groups (DRGs).

Currently, in the civilian community, the responsibility for the correct and timely flow of patient information has been delegated to Medical Records Professionals (MRPs) and this role has two dimensions (Cofer & Durkin, 1983; Flanagan, 1987). The first role is that of modifying or adding to the procedures and information flow to meet specific requirements of the DRGs regulations. The issues of physician attestation or identification of cost outliers are unique to prospective payment and demand special consideration. The second role requires improving existing communications and management reporting. If the information received from admitting or from the inpatient wards is incomplete or untimely, there has never been a more appropriate moment to face and resolve this problem. What occurs daily (or does not occur) will have a major impact on the hospital's financial well-being.

Navy Medicine has adopted a similar philosophy and has identified the MRTs as being crucial to the successful implementation of the DRGs (Southwest Geographic Regional DRGs Seminar, August 1989). The

questions to be addressed by the local NMTF Commanders are (1) do their current MRTs have the required fund of knowledge necessary to carry out these required roles and if not (2) what type of DRGs training program will fulfill their specific needs.

Although there is little information describing the knowledge required by the medical records department to implement the DRGs system in the literature, Major Stanley Illich established, while conducting his Graduate Management Project on A Study to Determine A Training Plan For The Medical Records Personnel of Brooke Army Medical Center, that there are eight key areas that on which MRTs must have a fair amount knowledge on. (Fair has been defined as scoring 50-59% on the Illich DRGs Knowledge Level Survey). These areas are General Knowledge (definitions, acronyms, recognition), Prospective Payment System vs. Retrospective Payment, the Purpose of Diagnosis Related Groups, the Scope of Diagnosis Related Groups, Medical Records Coding, Computers, Resource Reallocation Methodology for the Department of Veteran's Affairs, and the Implementation Plans of their affiliate service (Bureau of Medicine and Surgery

for the purpose of this study).

The purpose of this study was to obtain information about the level of knowledge that MRTs at NHSD have on DRGs using the Illich Knowledge Level Survey and to provide recommendations on what information on DRGs should be included in developing an effective training program based on the results.

Conditions which prompted the Study

On August 5, 1988, in accordance with Public Law 100-180, the Assistant Secretary of Defense for Health Affairs, William Mayer, M.D., directed each of the Military Services to implement a DRG-based resource allocation methodology in all Military Health Services Systems (Mayer, 1988). A major component of this implementation process was to develop a DRG educational plan. It was the Assistant Secretary's opinion that all Medical Treatment Facility personnel including resource managers, medical care providers, medical records personnel, and information system managers, would be affected by this system.

To date, very little has been accomplished to prepare Navy Medical personnel, specifically at the

local NMTF level, for DRG implementation (telephonic interviews August 1989). As late as 15 September 1989, hospital Commanders were still anticipating higher authority guidance on a program that could have significant impact on their operating budgets for Fiscal Year 1990.

Some activities, such as Naval Hospitals Great Lakes and Corpus Christi, have taken proactive steps to train their personnel. They are assuming that the DRG system being implemented by BUMED will be similar to that being used in the civilian sector. They are using the experience of their MRTs, supplemented by formal DRG training, to develop informal training programs. Their approach was to keep the training basic and to provide additional follow-on upon receipt of guidance from headquarters.

Naval Hospital, San Diego is currently in the process of joining those facilities who have taken proactive steps towards training their personnel. However, the Command wanted to take a more scientific approach towards evaluating its personnel training needs. In order to accomplish this, it was necessary for the Command to first appoint a DRG Implementation

Team, which was tacked with defining DRG program goals and objectives and, second to evaluate the current knowledge on DRGs among staff personnel.

The Need for Evaluating

Evaluation has been defined in a variety of ways. Stufflebeam et al, stated that evaluation is "the process of delineating, obtaining, and providing useful information for judging decision alternatives." A second popular concept of evaluation interprets it as "the determination of the congruence between performance and objects" (Mehrens, 1984). For the purpose of this study, evaluation is defined as the process of obtaining useful information about the current knowledge about DRGs among MRTs at Naval Hospital, San Diego. This information will facilitate the development of an effective DRG training program.

Education and training is considered by many to be the most important enterprise in our society. At some time and in some way every citizen is directly involved with education. Because education is such an important enterprise, it is crucial to evaluate processes and product. Why evaluate? For one reason, the taxpayer demands an accounting. If large sums of their money

are spent on projects, they have a right to know the results. Another reason is that doctors, nurses, administrators and other health care employees all work hard to ascertain the degree to which their goals have been realized. The satisfaction of knowing and the removal of ignorance are also important reasons for evaluation. But these are secondary to the basic reason: evaluations are essential to sound decision making. Decisions about education should be based on accurate, relevant information; information that can be obtained through a variety of ways. For the purpose of this study, information on the current knowledge about DRG among MRTs was obtained using the Illich Knowledge Level Survey Instrument.

What is Knowledge?

Websters' Third New International Dictionary defines knowledge as the fact or condition of knowing something with familiarity gained through experience of or contact or association with the individual or thing so know. The Compact Edition of the Oxford Dictionary defines knowledge as the fact or condition of being instructed, or having information acquired by study or research. For the purpose of this study, knowledge is

defined as recall or recognition of general and specific elements in the area of Diagnosis Related Groups. This knowledge is a function of job experience involving DRGs or Prospective Payment, formal training (college, business seminars, etc.) on DRGs or Prospective Payment, and familiarity with DRGs or Prospective Payment (keeping informed through journals and magazines).

Readiness for Learning

The importance of readiness for learning is a well-established concept (Bloom, 1971; Mehrens, 1984). Educators should have estimates of the students' capacity for learning, as well as estimates of what the student currently knows or does not know at the beginning of instruction. It is inefficient and perhaps even damaging to the individual to place him/her at too high or low a step in an instructional sequence (Mehrens, 1984). It was therefore imperative that a knowledge survey be conducted at Naval Hospital, San Diego prior to establishing a formal DRG training program.

Purpose of the Study

The purpose of the study was to obtain information about the level of knowledge that MRTs at Naval Hospital San Diego have on DRGs and to provide recommendations on what information about DRGs should be included in developing an effective training program. The major objectives of the study were to distribute a DRG questionnaire, to analyze the data obtained through the survey instrument to determine if deficiencies in DRG knowledge exist, and to provide recommendations on what information should be included in a formal DRG training program.

METHODS

Subjects

The entire medical records staff at NHSD, N=17, was included in the study. Subjects were placed in one of three groups, Administration and Management (N=2), Coding Personnel (N=9), or Others (N=6), based on how they described their position or job title.

Instruments

The instruments used in this study included telephonic interviews (to assess the current level of

training being provided throughout Navy Medicine) and a DRG Knowledge Level Survey. The latter, a 30-item questionnaire, developed by Major Stanley Illich and later modified by the author, was designed specifically for the study to evaluate DRG knowledge among MRTs. The targeted knowledge areas included, General DRG Knowledge, Prospective and Retrospective Payment, the Purpose of DRGs, the Scope of DRGs, Medical Records Coding, Computers, the Resource Reallocation Methodology being used by the Department of Veteran's Affairs, and the Implementation Plans for the Bureau of Medicine and Surgery. A total of 107 points, equaling 100 percent, could be collected from the 30 items being evaluated. Because the population was similar to Illich's study population, and the modifications made by the author only affected the name of the military service affiliation, a reliability and validity check was not repeated.

Procedure

Approximately two weeks prior to administering the knowledge level survey, the Head of the Patient Administration Department was notified of the date and time that the questionnaire would be issued. He was

reminded that the study was a Graduate Management Project and that his staff was under no obligation to participate. It was further explained that all data collected using the survey instruments would remain confidential, that no personal identification should be placed on the survey instruments and that a copy of the completed study would be provided to his staff. Ethical considerations and subject's rights have been addressed.

On August 29, 1989, the entire medical records staff assembled in the Patient Administration Department and 17 questionnaires were distributed. Each surveyee was informed that he/she was participating in a Graduate Management Project and that he/she was under no obligation to participate. Further instructions included, the need to complete the entire questionnaire and that no personal identification should be placed on the instruments.

Approximately one hour after the questionnaires were issued, 17 questionnaires were collected and the data was analyzed. To maintain consistency with previous studies conducted in this area (Illich, 1988; Saunders, 1989), the questionnaires were graded

counting only the correct answers. Nothing was subtracted for incorrect answers. Grades were recorded as a percentage of total points in each subject area.

Appendix A details the subject areas and the points awarded for each area. All medical records personnel, coding personnel, and all others were classified as to their level of DRG knowledge (Appendix B). The data obtained from the 17 questionnaires was analyzed to determine if MRTs at NHSD, on the average, have a fair knowledge of Diagnosis Related Groups. The data was then analyzed to determine if specific groups within the MRTs have a fair knowledge of DRGs. Appendix C presents summaries of data relevant to the findings.

RESULT

The 17 medical records technicians had a Total DRG Knowledge score per technician for all technicians of 31.5% (range, 1.0 - 90); the highest Total DRG knowledge score was obtained by administration and management personnel. The mean General Knowledge score for all technicians was 27.8% (range, 4.0 - 82.0); again the highest score obtained was by administration

and management personnel. The mean score for Prospective and Retrospective Payment knowledge level for all technicians was 11.8% (range, 0.0 - 100.0); only the administration and management personnel provided correct responses. The mean score for the Purpose of DRGs for all technicians was 31.8% (range, 0.0 - 86.0). The mean score for the Scope of DRGs for all technicians was 39.9% (range, 0.0 -88). The mean score for Medical Record Coding for all technicians was 38.4% (range, 0.0 - 90.0). The mean score for Computer knowledge was 26.2% (range, 0.0 - 90.0). The mean score for the Resource Reallocation Methodology being used by the Department of Veteran's Affairs was 27.9% (range, 0.0 - 100). The mean score for Implementation Plans for the Bureau of Medicine and Surgery was 23.7% (range, 0.0 - 62.0). The Summary of Statistics (Appendix C), for the variable Total Score and all eight subject areas shows that the average score for all respondents fell below the level of DRG knowledge described by Illich as minimum. This observation alone strongly suggests that there is a need for DRG training in the Medical Record Division at NHSD.

The data also indicated that among the three

groups, administration and management personal, on the average, scored higher than the other two groups (Appendix C). Further analysis indicated that administration and management personnel fell into the category labelled, Good Knowledge of DRGs and that 50% of this group scored in the Excellent level-of-knowledge category.

As demonstrated in previous studies (Illich, 1988; Saunders, 1989), the coding staff and others did not score well. Both groups were particularly deficient in the area of Prospective and Retrospective payment with an average score of 0.0%. Appendix D displays graphic comparisons of the NHSD results to data gathered during the Illich study and a similar study which was conducted by the author at Naval Hospital, Camp Pendleton, CA early this year. The data indicated that there is a definite separation in the level of DRG knowledge among the groups and showed that this phenomenon was not unique to NHSD as the data is consistent among all three Military Treatment Facilities surveyed.

DISCUSSION

The purpose of this study was to obtain information about the level of knowledge that MRTs at Naval Hospital, San Diego had on DRGs. The data obtained during this study indicated that on the average, MRTs at NHSD, had less than minimum knowledge on DRGs and strongly suggested that if a Prospective Payment system is to be implemented at NHSD, that formal DRG training was required. The question then became if a Prospective Payment system was to be implemented at Naval Hospital, San Diego, what type of information should be included in a formal Diagnosis Related Groups training program for MRTs?

Based strictly on the DRG Knowledge Survey, it has been determined that, with the exception of the administration and management personnel (N=2), the medical records staff was extremely deficient in all eight subject areas identified as essential by Illich. If a formal DRG training is to be successful, it should first address these eight areas.

General Knowledge

Orientation and introductory training should be conducted on the legislation and new review procedures

concerning Diagnosis Related Groups (Flanagan, 1983). Medical Records Technicians should be provided a brief history of the prospective payment concept and how and why it has evolved. The training program should address the standard acronyms and definitions that are being used in association with DRGs and prospective payment by the American Medical Record Association. A section should also be included on International Classification of Diseases, 9th Revision: Clinical Modification, and the Uniformed Hospital Discharge Data Set.

Prospective Payment System vs. Retrospective Reimbursement

The role of the medical record department has become more crucial under DRGs. Timeliness and accuracy of clinical data has become critical to the hospital's financial success (Hodges & Quinn, 1985). As a result it has become necessary to educate Medical Records Technicians on their new relationship with the finance department. To facilitate this, medical record technicians should be provided a brief overview on the types of payment systems, specifically the difference between prospective payment and retrospective

reimbursement, again to show how payment in the health care industry has evolved. Medical Records Technicians should be able to discuss the direct relationship between adequate and appropriate classification of medical treatment to financial reimbursement or reallocation whatever the case may be.

The Purpose of Diagnosis Related Groups

Employees perform better when they (1) provide input on how the work is going to be accomplished and (2) when they understand what it is that they are suppose to be doing (Mobley, 1988). It is important that the purpose of the DRGs system, as defined by the Bureau of Medicine and Surgery, be included in the program in order to provide information on why the DRGs system is being implemented.

The Scope of Diagnosis Related Groups

Employees need to know to what extent the DRGs system is going to be implemented. Does the proposed system have any similarities to exiting systems in the civilian community or the Department of Defense or the Department of Veteran's Affairs? What are the worst case scenarios involved in implementing the system, and to what degree will the system affect the Command's

budget? These questions and possibly more should be addressed by a formal training program.

Medical Record Coding

In their article, 'Defining Medical Record and Finance Department Relationships', Joseph Hodges and Mary Quinn wrote that' 'only skilled professionals who have been trained to code through specific educational curricula and on-the job training should be allowed to assigned codes.' The coder must have knowledge of anatomy, physiology, and the pathophysiology of diseases to determine appropriate principal diagnosis and to ensure that all conditions have been coded for correct DRG assignment (Tucker, 1978; Hodges & Quinn, 1985).

The coder must have specific training in the ICD-9-CM Classification system. The ability to locate diseases or procedures in the alphabetical index is not sufficient. Many exclusion and inclusions as well as many coding technical issues can greatly affect the code rules and could ultimately affect reimbursement of the DRG.

There must be a discussion on Quality Control (Tucker, 1978; Flanagan, 1983). The accuracy of codes,

the sequence of diagnosis, the sequence of procedures and the completeness of codes must all be addressed. Whether the medical record information can be used as a data base depends on the utility of the information contained in the discharge abstract system (Hodges & Quinn, 1985). Medical Records Technicians must understand that a complete and accurate data base should include these items of principal concern:

1. A complete list of diagnostic and surgical procedures,

2. a correct principal diagnosis, to ensure correct assignment of a DRG,

3. names of admitting and all attending physicians,

4. details of all complication or comorbidities, and

5. patient discharge status.

Computers

The automation of the medical records department may be broken into four fundamental activities (Packer, 1985). These are the master patient index, chart location, encoder and grouper to determine appropriate DRGs, and abstracting. For the purpose of this study

and the initial training of Medical Records Technicians, it is suggested that only encoder and grouper be discussed. Medical Records Technicians should be provided with working definitions of encoder and grouper and some practical experience in their use.

Resource Reallocation Methodology of Department of Veteran's Affairs

As mentioned previously, the MRTs should be exposed to the different types of payment systems currently being used in the health care industry. Of those systems, the Resource Reallocation Methodology that is being used by the Department of Veteran's Affairs closely resemble the type of system that the Department of Defense will be implementing and should be discussed (e.g. CDR S. Olson, personal communication).

Implementation Plans of The Bureau of Medicine and Surgery

Again, employees who understand what it is that they are suppose to do and why, general do a better job. Therefore, it is very important to inform the MRTs, during the initial phase of DRG implementation,

of current and future plans.

Weaknesses of the Study

The author reports two important weaknesses of the study. The first weakness is the absence of a test for significance. Because of the small sample size (N=17) and the extreme differences in survey results among the three groups, it was decided that a test for significance was not necessary to show that DRG knowledge was deficient, either on the total average, or on the average among the different groups. The information, as provided, is sufficient to indicate that formal training is needed if a Prospective Payment system is to be implemented.

The second weakness of the study was due to the number of survey items and the number of points available. The statistical data only provided estimates of individual scores for each of the eight subject areas due to rounding.

CONCLUSION

The need for, and the role of a DRGs training program at Naval Hospital, San Diego has been

established. A well-thought-out and well-developed training program can enhance departmental performance by:

1. Improving the services provided by strengthening performance through the application of what has been learned;

2. providing new knowledge and helping the department learn from its experiences, putting new knowledge to work and developing new technique;

3. developing flexibility and capability of the work force, and from an economic standpoint, promoting maximum productivity from human resources;

4. increasing department effectiveness through higher quality productivity;

5. providing fresh outlooks and eliminating old techniques;

6. training employees to correctly use new equipment, machines, process and methods; and

7. reducing financial loss and employee frustration.

The study of DRG knowledge among Medical Records Technicians is only the tip of the iceberg. As noted by former Assistant Secretary of Defense for Health

Affairs, William Mayer, M.D., "all Medical Treatment Facility personnel including resource managers, medical care providers, and information system managers would be affected by implementing the DRG system." It is therefore important that similar knowledge studies be conducted among these groups and training programs be developed to meet their individual needs.

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APPENDIX A

VALUES ASSIGNED TO SURVEY QUESTIONS BY SUBJECT

Subject Area	Number of Points	Percent of Test	Total No. of Question
General Knowledge	24	22	8
Prospective vs Retrospective	10	9	1
Purpose of Prospective Payment System	7	7	3
Scope of Diagnosis Related Groups	8	8	2
Coding	26	24	6
Computer	21	20	6
Veteran's Administration System	4	4	2
Navy Medical Department Plans	7	7	2
Total	107	101*	30

* Total Percentage when added is 101 due to rounding.
S. Illich, A Study to Determine A Training Plan for the Medical Records Personnel of Brooke Army Center 1988.

APPENDIX B

LEVEL OF KNOWLEDGE CLASSIFICATION

LEVEL OF KNOWLEDGE CLASSIFICATION

Based on survey test results and discussion with medical records experts during the Brooke Army Medical Center study the following level-classification table was constructed:

Percentage Scored	Level of knowledge for Diagnosis Related Groups
40-49	Minimum
50-59	Fair
60-69	Good
70-79	Excellent
>80	Superior

S. Illich, A Study to Determine A Training Plan for the Medical Records Personnel of Brooke Army Medical Center 1988.

APPENDIX C

SUMMARY OF STATISTIC, KNOWLEDGE LEVEL

SURVEY, NAVAL HOSPITAL SAN DIEGO

This statistical summary presents average scores expressed in percentages for each of the nine variables surveyed as achieved by: All Personnel, Management and Administration, Coding Personnel, and All Other Personnel. Minimum and maximum scores of each of the nine variables are also shown.

SUMMARY OF STATISTICS, KNOWLEDGE LEVEL SURVEY:
ALL PERSONNEL (N=17)

Subject Area	Variable	Mean	Minimum	Maximum
1	TOTSCORE	31.5	1.0	90.0
2	GENKNOWL	27.8	4.0	82.0
3	PPSVRET	11.8	0.0	100.0
4	PURPOSE	31.8	0.0	86.0
5	SCOPE	39.9	0.0	88.0
6	CODING	38.4	0.0	90.0
7	COMPUTE	26.2	0.0	90.0
8	VA	27.9	0.0	100.0
9	BUMED	23.7	0.0	62.0

TOTSCORE = Total Score
GENKNOWL = General Knowledge
PPSVRET = Prospective Payment System vs. Retrospective Reimbursement
PURPOSE = Purpose of Diagnosis Related Groups
SCOPE = Scope of Diagnosis Related Groups
CODING = Coding of Medical Records
COMPUTE = Computers
VA = Veteran's Administration System
BUMED = Bureau of Medicine and Surgery

SUMMARY OF STATISTICS, KNOWLEDGE LEVEL SURVEY
MANAGEMENT AND ADMINISTRATION (N=2)

Subject Area	Variable	Mean	Minimum	Maximum
1	TOTSCORE	62.5	35.0	90.0
2	GENKNOWL	58.5	35.0	82.0
3	PPSVRET	100.0	100.0	100.0
4	PURPOSE	57.5	29.0	86.0
5	SCOPE	69.0	50.0	88.0
6	CODING	58.0	26.0	90.0
7	COMPUTE	54.5	19.0	90.0
8	VA	50.0	0.0	100.0
9	BUMED	62.0	62.0	62.0

TOTSCORE = Total Score
GENKNOWL = General Knowledge
PPSVRET = Prospective Payment System vs Retrospective Reimbursement
PURPOSE = Purpose of Diagnosis Related Groups
SCOPE = Scope of Diagnosis Related Groups
CODING = Coding of Medical Records
COMPUTE = Computers
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SUMMARY OF STATISTICS, KNOWLEDGE LEVEL SURVEY:
CODING PERSONNEL (N=9)

Subject Area	Variable	Mean	Minimum	Maximum
1	TOTSCORE	36.6	15.0	44.0
2	GENKNOWL	34.6	17.0	65.0
3	PPSVRET	0.0	0.0	0.0
4	PURPOSE	38.0	14.0	71.0
5	SCOPE	49.0	13.0	75.0
6	CODING	45.6	9.0	70.0
7	COMPUTE	35.2	1.0	54.0
8	VA	27.7	0.0	75.0
9	BUMED	24.1	0.0	31.0

TOTSCORE = Total Score
GENKNOWL = General Knowledge
PPSVRET = Prospective Payment System vs Retrospective Reimbursement
PURPOSE = Purpose of Diagnosis Related Groups
SCOPE = Scope of Diagnosis Related Groups
CODING = Coding of Medical Records
COMPUTE = Computers
VA = Veteran's Administration System
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SUMMARY OF STATISTICS, KNOWLEDGE LEVEL SURVEY:
ALL OTHER PERSONNEL (N=6)

Subject Area	Variable	Mean	Minimum	Maximum
1	TOTSCORE	13.0	1.0	32.0
2	GENKNOWL	7.5	4.0	13.0
3	PPSVRET	0.0	0.0	0.0
4	PURPOSE	14.1	0.0	57.0
5	SCOPE	16.6	0.0	50.0
6	CODING	17.6	0.0	46.0
7	COMPUTE	3.3	0.0	18.0
8	VA	20.8	0.0	75.0
9	BUMED	10.3	0.0	31.0

TOTSCORE = Total Score
GENKNOWL = General Knowledge
PPSVRET = Prospective Payment System vs Retrospective Reimbursement
PURPOSE = Purpose of Diagnosis Related Groups
SCOPE = Scope of Diagnosis Related Groups
CODING = Coding of Medical Records
COMPUTE = Computers
VA = Veteran's Administration System
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DATA, KNOWLEDGE BASE SURVEY
NAVAL HOSPITAL SAN DIEGO

DATA, KNOWLEDGE BASE SURVEY,
NAVAL HOSPITAL, SAN DIEGO

The following data represents the percentage scored by each of 17 respondents on all subjects (Total Score) and each respondent's score on the eight individual subject area surveyed.

KNOWLEDGE BASE SURVEY SCORES: ALL PERSONNEL

RPT	TSC	GKL	PPS	PUR	SCP	COD	COM	VA	BUM
1	90	82	100	86	88	90	90	100	62
2	30	22	0	14	63	30	36	75	31
3	38	57	0	71	50	30	45	25	0
4	30	26	0	43	63	40	1	0	0
5	28	30	0	43	38	50	1	0	0
6	44	30	0	43	38	66	45	0	62
7	54	65	0	71	38	70	54	0	31
8	32	13	0	57	50	46	18	75	31
9	15	17	0	14	13	9	19	0	0
10	24	8	0	14	50	40	1	50	31
11	11	8	0	0	0	20	1	0	0
12	43	26	0	14	63	56	45	75	31
13	5	4	0	14	0	10	0	0	0
14	5	8	0	0	0	10	0	0	0
15	48	39	0	29	75	60	54	75	31
16	35	35	100	29	50	26	19	0	62
17	1	4	0	0	0	0	0	0	0

RPT = Respondent
TSC = Total Score
GKL = General Knowledge
PPS = Prospective Payment vs Retrospective Reimbursement
PUR = Purpose of Diagnosis Related Groups
SCP = Scope of Diagnosis Related Groups
COD = Coding of Medical Records
COM = Computers
VA = Veteran's Administration
BUM = Bureau of Medicine and Surgery

KNOWLEDGE BASE SURVEY SCORES:
MANAGEMENT AND ADMINISTRATION

RPT	TSC	GKL	PPS	PUR	SCP	COD	COM	VA	BUM
1	90	82	100	86	88	90	90	100	62
16	35	35	100	29	50	26	19	0	62

KNOWLEDGE BASE SURVEY: CODING PERSONNEL

RPT	TSC	GKL	PPS	PUR	SCP	COD	COM	VA	BUM
2	30	22	0	14	63	30	36	75	31
3	38	57	0	71	50	30	45	25	0
4	30	26	0	43	63	40	18	0	31
5	28	30	0	43	38	50	1	0	0
6	44	30	0	43	38	66	45	0	62
7	54	65	0	71	38	70	54	0	31
9	15	17	0	14	13	9	19	0	0
12	43	26	0	14	63	56	45	75	31
15	48	39	0	29	75	60	54	75	31

RPT = Respondent
TSC = Total Score
GKL = General Knowledge
PPS = Prospective Payment vs Retrospective Reimbursement
PUR = Purpose of DRGs
SCP = Scope of DRGs
COD = Coding
COM = Computers
VA = Veteran's Administration
BUM = BUMED

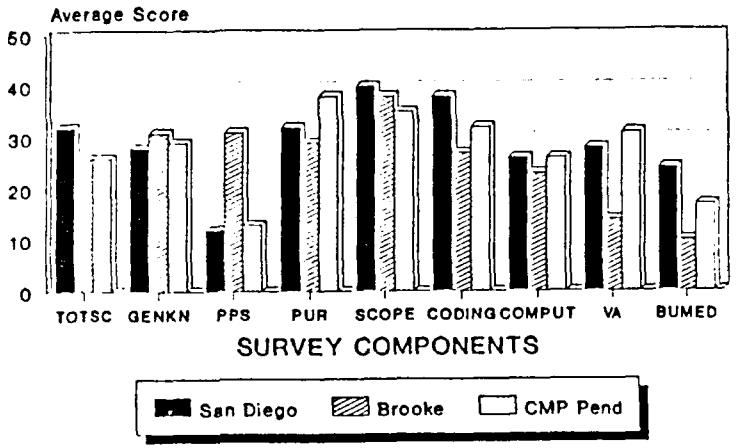
KNOWLEDGE BASE SURVEY SCORES:
ALL OTHER PERSONNEL

RPT	TSC	GKL	PPS	PUR	SCP	COD	COM	VA	BUM
8	32	13	0	57	50	46	18	75	31
10	24	8	0	14	50	40	1	50	31
11	11	8	0	0	0	20	1	0	0
13	5	4	0	14	0	10	0	0	0
14	5	8	0	0	0	10	0	0	0
17	1	4	0	0	0	0	0	0	0

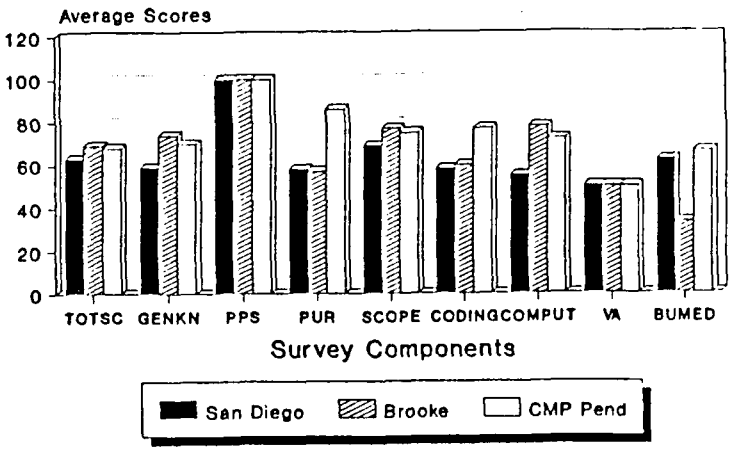
RPT = Respondent
TSC = Total Score
GKL = General Knowledge
PPS = Prospective Payment vs Retrospective Reimbursement
PUR = Purpose of DRGs
SCP = Scope of DRGs
COD = Coding
COM = Computers
VA = Veteran's Administration
BUM = BUMED

APPENDIX D

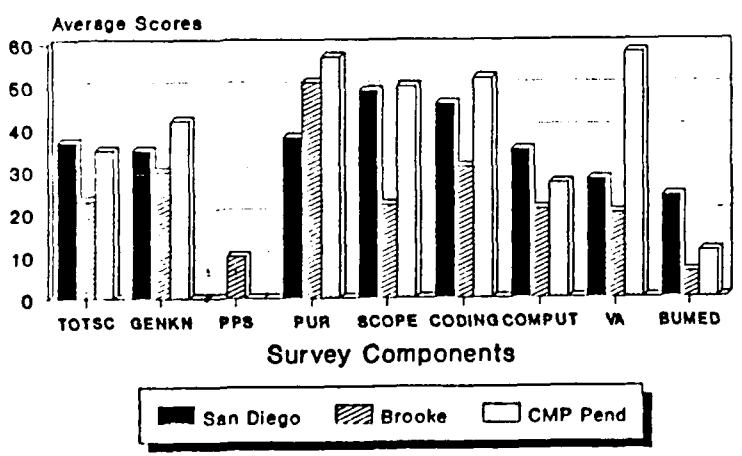
DRG KNOWLEDGE SURVEY
All Personnel



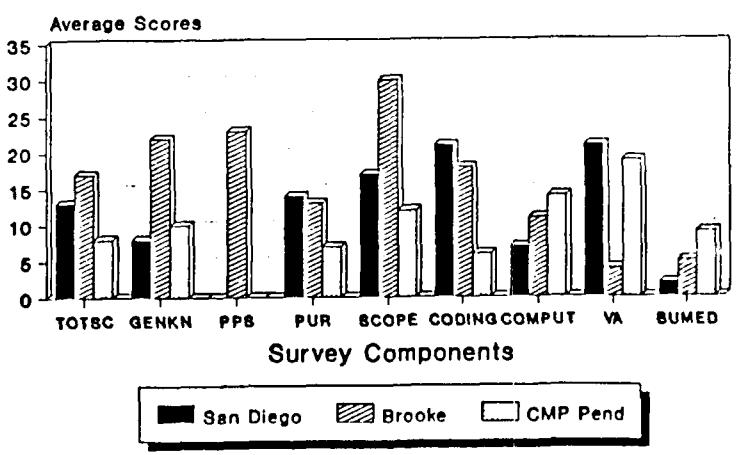
DRG KNOWLEDGE SURVEY
Administration Personnel



DRG KNOWLEDGE SURVEY
Coding Personnel

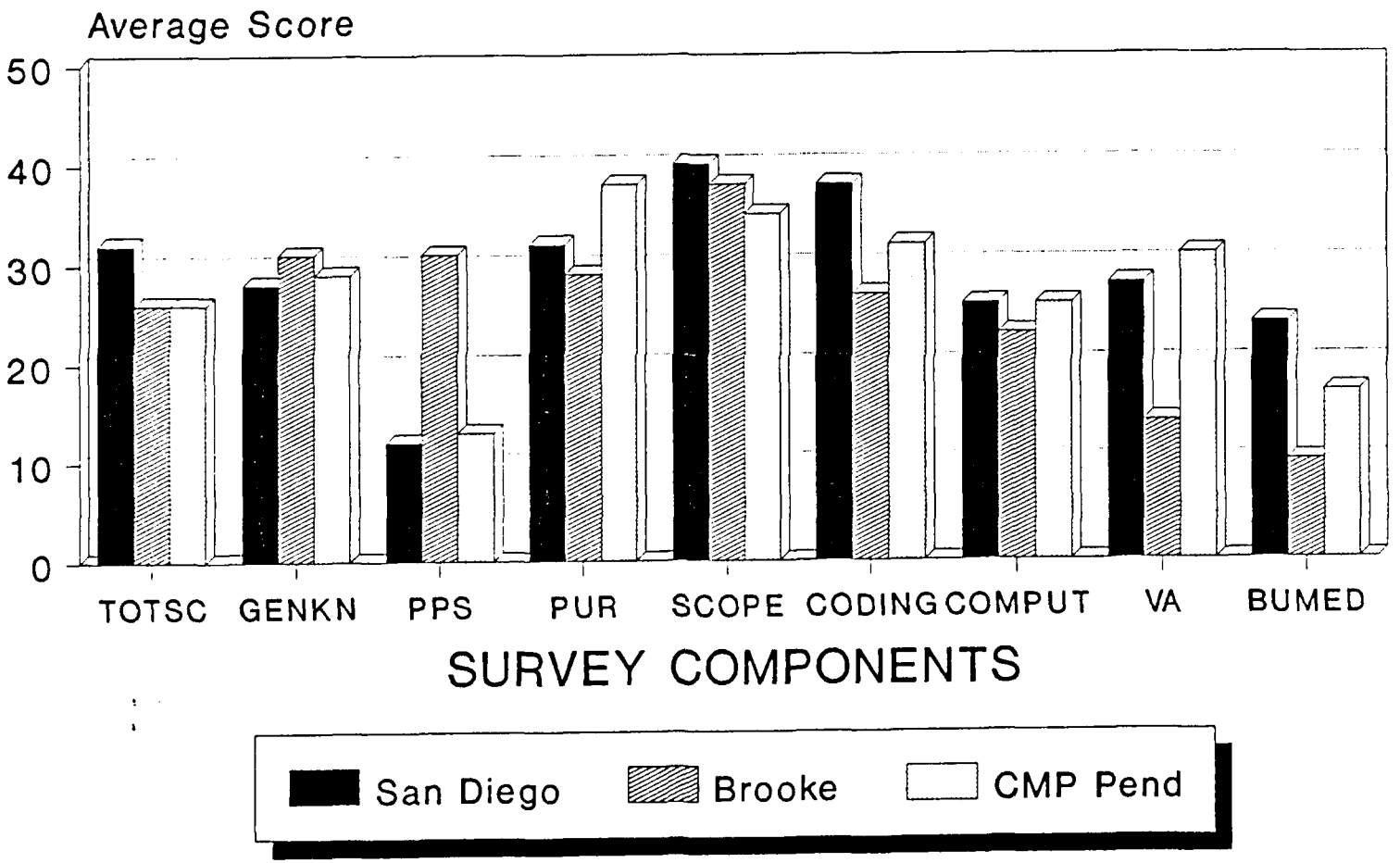


DRG KNOWLEDGE SURVEY
Other Personnel



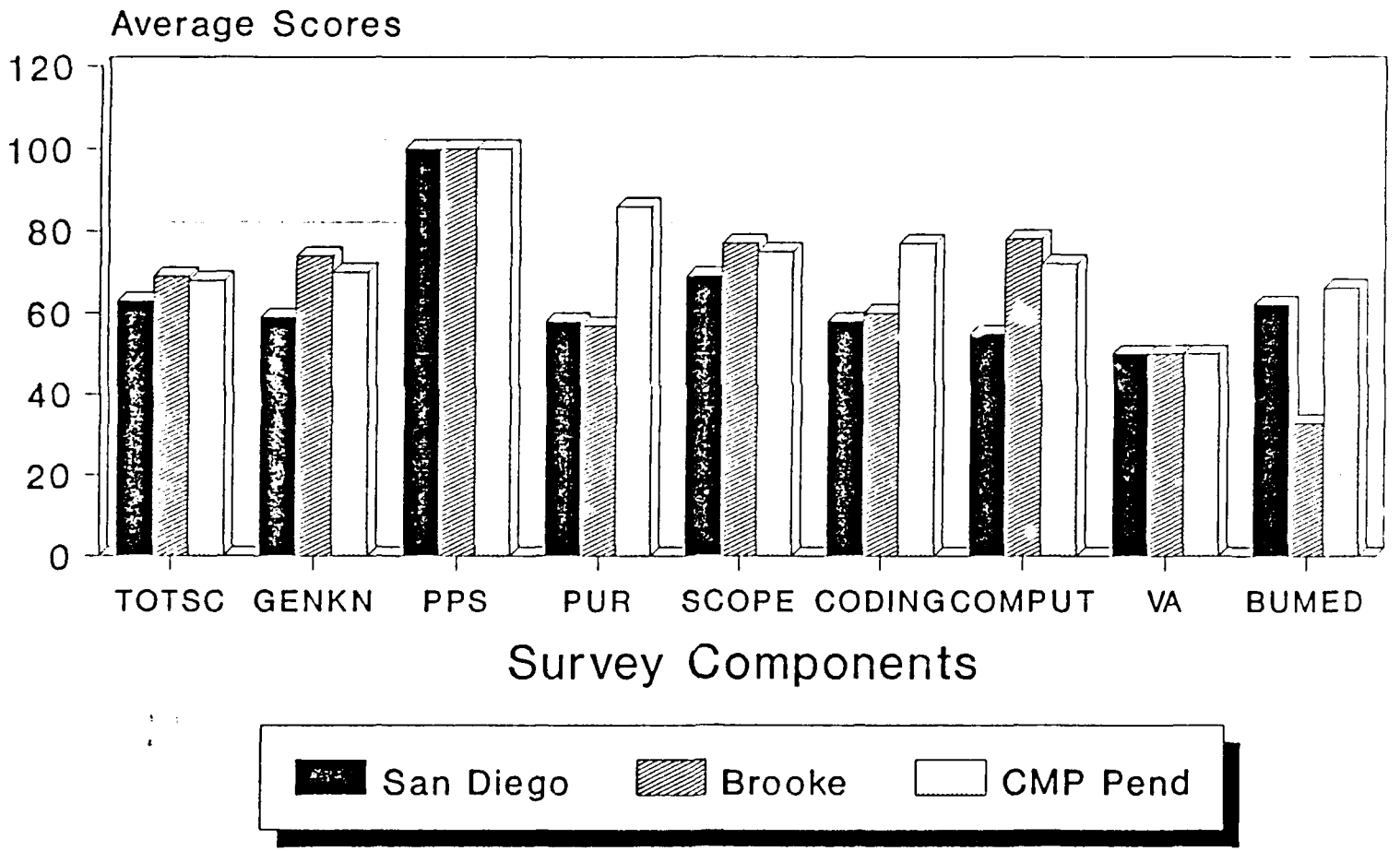
DRG KNOWLEDGE SURVEY

All Personnel



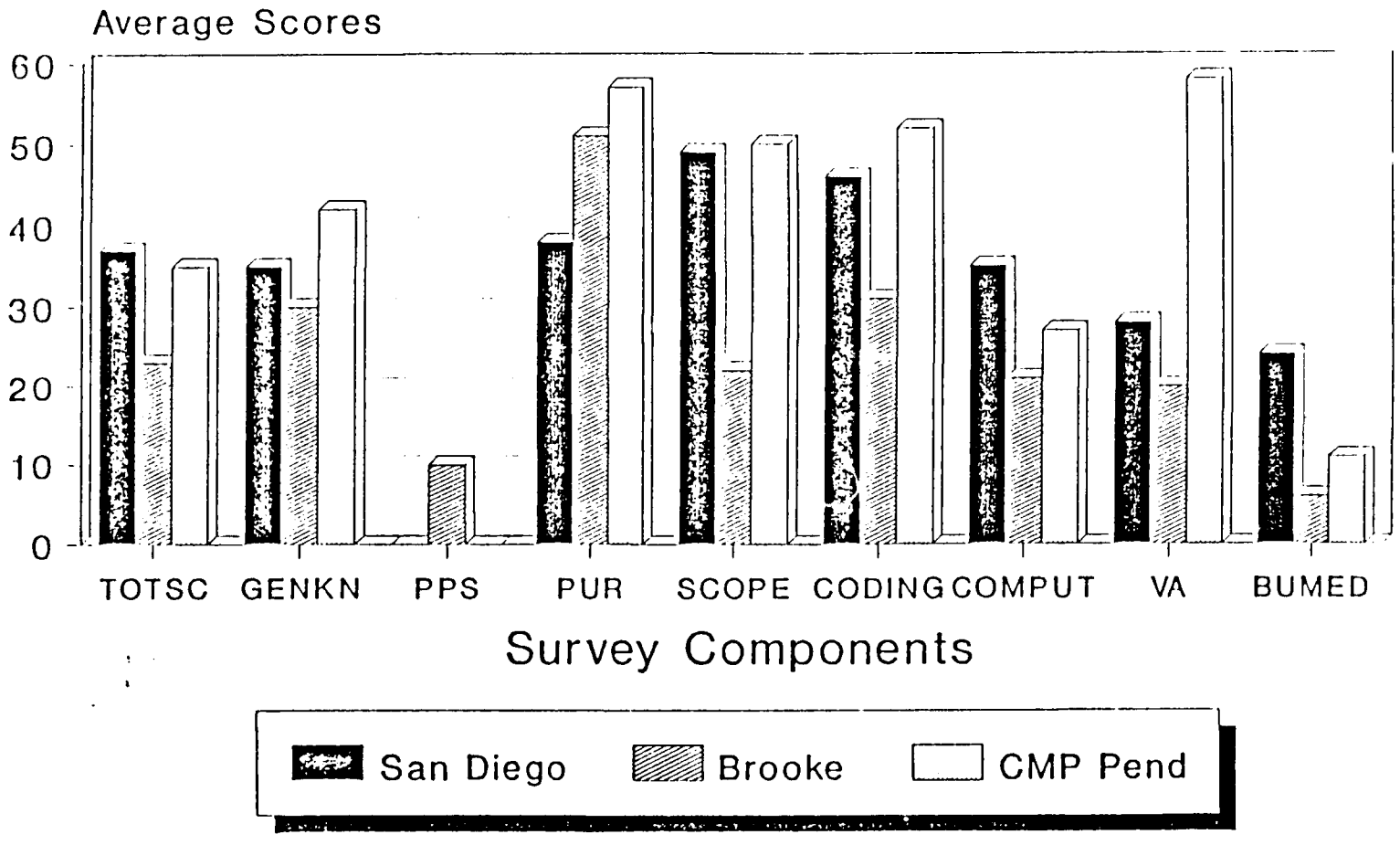
DRG KNOWLEDGE SURVEY

Administration Personnel



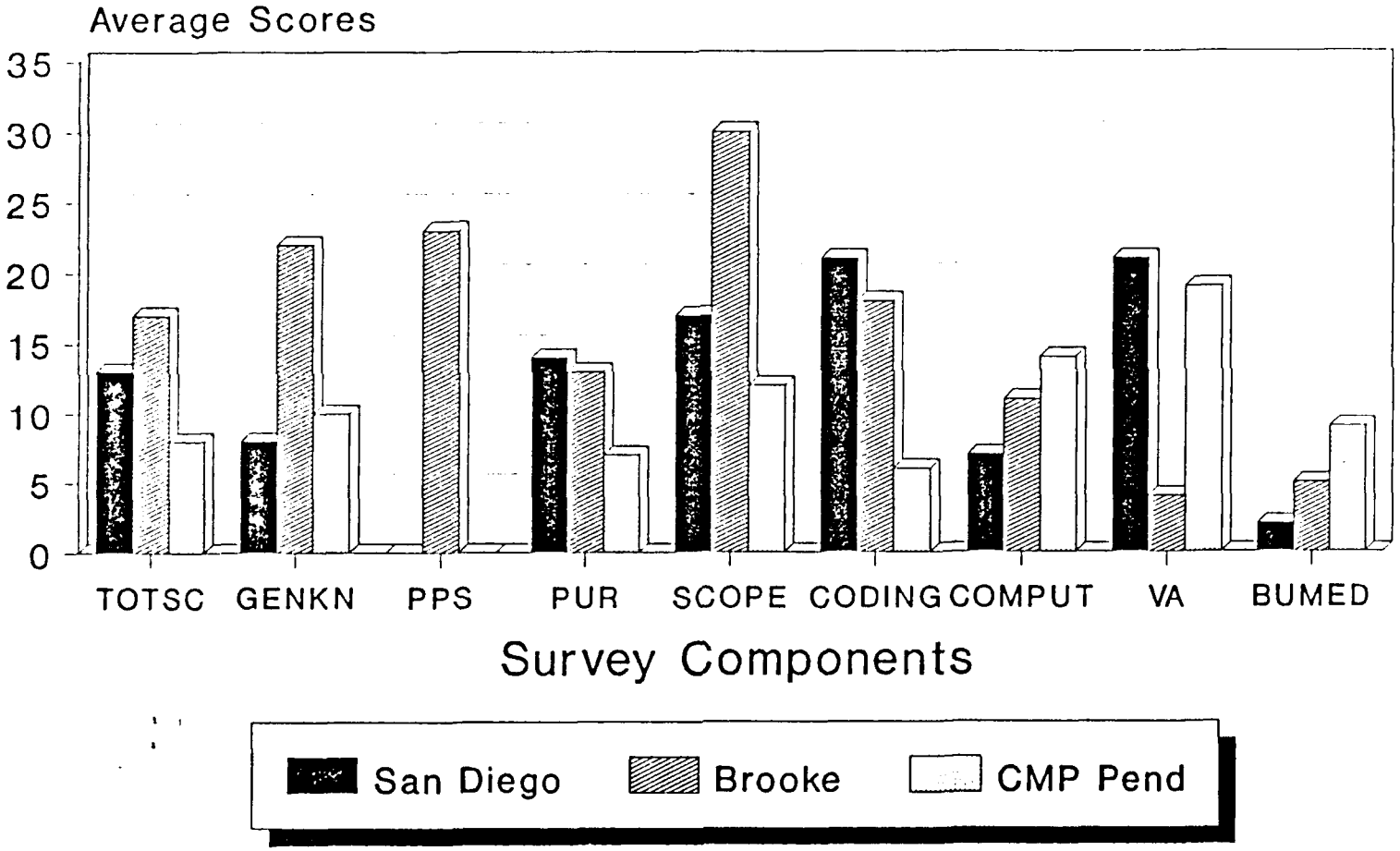
DRG KNOWLEDGE SURVEY

Coding Personnel



DRG KNOWLEDGE SURVEY

Other Personnel



APPENDIX E

KNOWLEDGE LEVEL SURVEY

The purpose of this survey is to determine the level of knowledge of the diagnosis-related group (DRG) system in your hospital's medical records department. This survey was constructed using information gathered from a review of the literature, structured interviews with medical records experts in San Antonio hospitals, and telephonic interviews with national medical records experts. Suggestions and recommendations from these sources were translated into questions which will evaluate your knowledge of the DRG system. The answers you give will assist in the determination of a training plan (DRGs) for medical records technicians.

DEMOGRAPHIC DATA

In which section of medical records do you work?

What is your present position or job title?

Which college degrees have you earned? _____

Circle one if it applies:

a. I am a accredited records technician (ART).

b. I am a registered records technician (MRT).

Does your job description include the coding of medical records?

YES___ NO___

How many years of experience do you have in the job that you are currently performing? _____

Have you recently (within the last six months) attended a workshop or seminar dealing with any aspect of the DRG system?

INSTRUCTIONS

Please circle the appropriate letter(s). Some questions may have more than one answer. The short answer questions can be answered in less than three or four sentences. "I don't know" is an acceptable answer. Please do not guess. If you do not know the correct answer, mark or write in "I don't know."

1. Which of the following are familiar to you as terms commonly used in the DRG system?

a. Case mix
b. ICD-9-CM
c. Severity of illness
d. Prospective payment
e. Uniform Hospital Discharge Data Set (UHDDS)

2. Which of the following do you recognize as acronyms frequently used in the DRG system?

a. HCFA
b. TEFRA
c. LOS
d. PRO
e. MDC

3. The letters in the acronym DRG stand for:

a. Disease Ranked Groupings
b. Diagnosis Related Groups
c. Diagnostic Relevant Grouping
d. I don't know

4. From the following list, choose which author(s) have been active in the evolution of the DRG system?

a. Fetter
b. Thompson
c. Averill
d. Breslin
e. I have never heard of any of these people.

---

*Designed by Major Stanley Illich in 1988 and modified by LT Jerome Saunders in 1989.

5. At which university was the first work with DRGs accomplished?

a. Harvard
b. Yale
c. Duke
d. Cornell

6. Circle the letter next to the statement which most closely defines case mix.

a. The mixture of cases of litigation incurred by a hospital.
b. The number of social work cases handled by a hospital.
c. The number and type patients treated by a hospital.
d. I don't know.

7. ICD-9-CM stands for:

a. Institutional Coding Designation--9th Volume--Clinical Monitoring
b. International Classification of Disease--9th Revision--Clinical Modification
c. International Coding Documentation--9th Printing-- Module
d. I don't know.

8. Explain retrospective reimbursement versus a prospective payment system.

9. Features of the DRG classification system include:

a. A set reimbursement amount for each DRG.
b. Reimbursement for average wholesale costs incurred.
c. A peer review organization.
d. A completely retrospective payment system.
e. A prospective payment system.

10. DRGs are eventually used as a prospective payment system for Medicare. For what purpose did the first researchers initially intend the DRG to be used? (two-word answer)?

11. Which of the following phrases most accurately describes the purpose of the diagnosis-related group system in the civilian sector? (Mark one answer only)

a. Resource allocation
b. Payment methodology for outpatient surgery
c. Reimbursement methodology
d. I don't know

12. Which of the following is not a primary reason for the implementation of the diagnosis-related groups system in the Navy Medical Department?

a. To reallocate resource
b. To provide comparison between Military and civilian hospitals based on DRGs.
c. To obtain reimbursement
d. I don't know

13. Which groups of people are likely to become involved in the implementation of the DRG system?

a. Physicians
b. Nurses
c. Medical records personnel
d. Administrators
e. Building inspectors
f. Logisticians
g. I don't know

14. Impact of DRGs on the hospital include:

a. The necessity to become more efficient
b. The necessity to look carefully at expensive new technology
c. Closer communications among hospital workers
d. Possible changes in organizational structure
e. Affect on the financial survival of the hospital
f. None of the above

15. The principal diagnosis is the diagnosis which:

a. After discharge is determined to have been most responsible for admission
b. Is determined to have caused the use of the most resources
c. After comparison with all others brings in the most money for the hospital

16. Please define primary diagnosis (short answer):

17. What is an outlier?

18. What is a trim point?

19. Using the Medicare DRG system, which of these pieces of information must be obtained by the medical records department in order to assign patients to a DRG?

Principal diagnosis
b. Number of outpatient visits last month
c. Operating room procedures
d. Complications
e. Diet restrictions
f. Comorbidities
g. Discharge status
h. None of the above

20. Please write to the right of each acronym what each set of letters stand for:

a. COPD--
b. MI--
c. UHDDS--
d. MDC--
e. TEFRA--
f. HCFA--
g. PRO--

21. Which of these acronyms represents the prospective payment system used by the Veteran's Administration hospital for inpatients?

a. LOS
b. TEFRA
c. DRGs
d. PIP
e. I don't know

22. The DRG system adopted for use by the Veteran's Administration uses which type of diagnosis?

a. Primary
b. Frequent
c. Principal
d. I don't know

23. What is a DRG grouper?

24. What is a Encoder?

25. The Bureau of Medicine and Surgery (BUMED) is planning to include an encoder into which of these systems?

a. CHCS
b. TRIPAS
c. AQCESS
d. DCCS
e. I don't know

26. The acronym CHCS stands for:

a. Complete Health Composite System
b. Composite Health Care System
c. Combined Heart Catheterization System
d. Chronic Heart Composite System

27. What does the acronym MEPRS stand for?

a. Military Examples of Prospective Repayment System
b. Minor Expenses and Performances Retrospective System
c. Medical Expense and Performance Reporting System
d. Military Expense and Performing Reporting System

28. Matching. Place the correct number corresponding to one of the applications on the right in the space provided next to the matching application on the left. There is only one answer per system.

System	Application
DBMS-DSS____	1. Accuracy, reliability
'UR' Tickler___	2. Patient classification
Precertification___	3. Concurrent care management
Grouper____	4. Admission and surgical rate control
Encoder___	5. Retrospective analysis

29. Congress had ordered DRGs to be implemented by the military medical department by 1 October 1987. Instead, the Department of Defense has initiated a phased approach to implementation of the DRG system. The BUMED plan will be phased in over how many years?

a. Three
b. Five
c. Two
d. Six

30. Matching. The Office of the Secretary of Defense, Health Affairs, plans to initiate certain activities between 1988 and 1992 to facilitate implementation of DRGs in the military. Please place the correct number corresponding to one of the activities on the right in the space provided next to the year in which this activity will occur on the left. More than one activity may match to a single date.

Year	Activity
1988____	1. Limited allocation of resources using DRGs
1989____	2. Composite health care system will be available and will allow each medical treatment facility to link specific resources use with individual patients
1992____	3. For resource allocation, this is a neutral year
	4. Data base refined and integrated
	5. DRG management software and related tools will be developed and procured to support medical treatment facility-level making